IN THE CLAIMS:

Please amend the claims as follows:

1-36 (cancelled)

37.   (Currently Amended) An apparatus for converting an organometallic precursor material to form a metal-containing film adherent to a substrate, comprising:

a load station to store the substrate before processing;

a transfer device to deliver the substrate between stations;

a coating station wherein the substrate is coated with a sufficient amount of the organometallic precursor material to coat at least a portion of the substrate, wherein the precursor material upon exposure to sufficient energy forms a metal-containing layer adherent to the substrate, and wherein the precursor material is resist-free;

a pre-convert station having a pre-conversion-energy generator adapted to expose at least portions of the precursor material to a pre-conversion energy exposure dose of such intensity and duration such that the exposed pre-converted precursor material is not converted to a degree sufficient to impair pattern resolution;

a pattern convert station having a conversion-energy generator adapted to expose portions of the pre-converted precursor material to a patterned conversion energy dose to form a metal-containing pattern adherent to the substrate.

38.   (Previously presented) The apparatus of claim 37, wherein the pre-conversion-energy generator comprises a heat source, a light source, or a combination thereof; and the conversion-energy generator comprises a light source, an electron beam source, an ion beam source, or a combination thereof.

39.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a light source; and the conversion-energy generator comprises a light source.

40.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator and the conversion-energy generator comprises a light source, wherein the light source emits light having a wavelength from about 150 nm to about 600 nm.

41.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a light source; and the conversion-energy generator comprises a coherent light source.

42.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a broadband light source; and the conversion-energy generator comprises a light source.

43.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a light source; and the conversion-energy generator comprises a broadband light source.

44.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a light source; and the conversion-energy generator comprises an electron beam source.

45.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a light source; and the conversion-energy generator comprises an ion beam source.

46.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a heat source; and the conversion-energy generator comprises a light source.

47.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a heat source; and the conversion-energy generator comprises a coherent light source.

48.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a heat source; and the conversion-energy generator comprises a broadband light source.

49.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a heat source; and the conversion-energy generator comprises an electron beam source.

50.   (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a heat source; and the conversion-energy generator comprises an ion beam source.

51.   (Withdrawn) The apparatus of claim 38, wherein the apparatus comprises a plurality of pre-convert stations arranged in parallel before a pattern convert station.

52.   (Previously presented) The apparatus of claim 38, wherein the apparatus comprises a plurality of pattern convert stations arranged in parallel after a pre-convert station.

53.   (Previously presented) The apparatus of claim 38, wherein the apparatus comprises a plurality of pattern convert stations arranged in series after a plurality of pre-convert stations.

54.   (Currently Amended) An apparatus for converting an organometallic precursor material to a metal-containing film adherent to a substrate, comprising:

a load station to store the substrate before processing;

a means of delivering the substrate between processing steps;

a means for coating the substrate with a sufficient amount of the organometallic precursor material to coat at least a portion of the substrate, wherein the precursor material upon exposure to sufficient energy forms a metal-containing layer adherent to the substrate, and wherein the precursor material is resist-free;

a means for pre-converting at least a portion of the precursor material such that the pre-converted precursor material is not converted to a degree sufficient to impair pattern resolution;

a means for pattern converting a portion of the pre-converted precursor material to form a metal-containing pattern adherent to the substrate; and

a means for developing the metal-containing pattern.

55. (Currently Amended) An apparatus for converting an organometallic precursor material to form a metal-containing film adherent to a substrate, comprising:

a load station to store the substrate before processing;

a transfer device to deliver the substrate between stations;

a coating station wherein the substrate is coated with a sufficient amount of the organometallic precursor material to coat at least a portion of the substrate, wherein the precursor material upon exposure to sufficient energy forms a metal-containing layer adherent to the substrate, and wherein the precursor material is resist-free;

a pre-convert station having a pre-conversion-energy generator adapted to expose at least portions of the precursor material to a pre-conversion energy exposure dose of such intensity and duration such that the exposed pre-converted precursor material is not converted to a degree sufficient to impair pattern resolution;

a first pattern convert station having a first conversion-energy generator adapted to expose portions of the pre-converted precursor material to a first patterned conversion energy dose to form a first metal-containing pattern adherent to the substrate; and

a second pattern convert station having a second conversion-energy generator adapted to expose portions of the pre-converted precursor material to a second patterned conversion energy dose to form a second metal-containing pattern adherent to the substrate.

56.   (Previously presented) The apparatus of claim 55, wherein the pre-conversion-energy generator comprises a heat source, a light source, or a combination thereof; the first conversion-energy generator comprises a light source, an electron beam source, an ion beam source, or a combination thereof, and the second conversion-energy generator comprises a light source, an electron beam source, an ion beam source, or a combination thereof.

57.   (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a light source; and at least one conversion-energy generator comprises a light source.

58.   (Previously presented) The apparatus of claim 56, wherein at least one conversion-energy generator comprises a light source, wherein the light source emits light having a wavelength from about 150 nm to about 600 nm.

59.   (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a light source; and at least one conversion-energy generator comprises a coherent light source.

60.   (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a broadband light source; and at least one conversion-energy generator comprises a light source.

61.   (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a light source; and at least one conversion-energy generator comprises an electron beam source.

62.   (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a light source; and at least one conversion-energy generator comprises an ion beam source.

63.   (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a heat source; and at least one conversion-energy generator comprises a light source.

64.   (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a heat source; and at least one conversion-energy generator comprises a coherent light source.

65.   (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a heat source; and at least one conversion-energy generator comprises a broadband light source.

66.   (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a heat source; and at least one conversion-energy generator comprises an electron beam source.

67.   (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a heat source; and at least one conversion-energy generator comprises an ion beam source.

68.   (Previously presented) The apparatus of claim 56, wherein the second conversion-energy generator is different than the first conversion-energy generator.

69.   (Previously presented) The apparatus of claim 56, wherein the second conversion-energy generator is the same as the first conversion-energy generator

70.   (Previously presented) The apparatus of claim 55, wherein the first pattern convert station contains the pre-converted substrate in a first atmosphere, and wherein the second pattern convert station contains the pre-converted substrate in a second atmosphere, wherein the first atmosphere is different than the second atmosphere.

71.   (Previously presented) The apparatus of claim 56, wherein the first pattern convert station contains the pre-converted substrate in a first atmosphere, and wherein the second pattern convert station contains the pre-converted substrate in a second atmosphere, wherein the first atmosphere is different than the second atmosphere.

72.   (Previously presented) The apparatus of claim 55, wherein the apparatus comprises a plurality of first and second pattern convert station arranged in parallel after a pre-convert station.

73.   (Previously presented) The apparatus of claim 55, wherein the apparatus comprises a plurality of pattern convert stations arranged in parallel after a pre-convert station.

74.   (Previously presented) The apparatus of claim 55, wherein the apparatus comprises a plurality of pattern convert stations arranged in series after a plurality of pre-convert stations.

75.   (Currently Amended) An apparatus for converting an organometallic precursor material to a metal-containing film adherent to a substrate, comprising:

a load station to store the substrate before processing;

a means of delivering the substrate between processing steps;

a means for coating the substrate with a sufficient amount of the organometallic precursor material to coat at least a portion of the substrate, wherein the precursor material upon exposure to sufficient energy forms a metal-containing material adherent to the substrate, and wherein the precursor material is resist-free;

a means for pre-converting the coated substrate such that the pre-converted precursor material is not converted to a degree sufficient to impair pattern resolution;

a first means for pattern converting a first portion of the pre-converted material to form a first metal-containing pattern adherent to the substrate; and

a second means for pattern converting a second portion of the pre-converted material to form a second metal-containing pattern adherent to the substrate; and

a means for developing the metal-containing pattern.